

**ABSTRACT OF THE INVENTION**

A method for refining image data from measured projection data acquired from a computed tomographic scanner is provided. Initially, measured projection data from the computed tomographic scanner is received. The measured projection data is reconstructed to generate initial reconstructed image data. The initial reconstructed image data is partitioned into a plurality of volumes based on image data quality, to generate partitioned reconstructed image data. The plurality of volumes comprise a good image data quality volume and a poor image data quality volume. Then the image data quality of the partitioned reconstructed image data is refined to generate an improved reconstructed image data.